"DEAD-MAN" REMOTE CONTROL

MODEL: DM433-03

User's Manual

Serial number :	Manufactured on :

IT IS ABSOLUTELY NECESSARY TO READ THE FOLLOWING INSTRUCTIONS BEFORE USING THE "DEAD-MAN" REMOTE CONTROL

SAFETY INSTRUCTIONS

IMPORTANT INFORMATION

A DM remote control used in an imprudent or unsuited way can become a dangerous tool that can cause serious wounds. It is imperative to carefully read these instructions **before** using it.

The operator must always keep in mind that the *handle* of the DM must be held in his/her hand for any application protected by the DM.

Any attempt to substitute this hand holding of the DM control, holding it in any way other than in one's hands, is formally prohibited, causing immediate and irreversible loss of the product guarantee, without prejudging of possible later actions to endanger the life of others.

The nominal range of the DM remote control is 150 meters in "free field", i.e. with direct vision and without obstacles and/or metallic surroundings. The real range is related to the places and to the potential conditions of RF transmission (i.e. interferences, radio perturbations, absorptions by metallic objects, etc.).

The temperature for using the DM lies between +5°C, and +55°C.

The DM handle (with the remote control) is IP65, however immersion into a liquid for more than one minute can destroy the batteries.

The DM remote control is made up of two distinct elements:
- The DM handle with Emitter which must absolutely be installed on the tube carrying the pipe diffusing the projected liquid and/or solid fluids.
- The Receiving Case, equipped with an antenna placed **vertically** and installed in accordance with the code of practice by an approved professional.

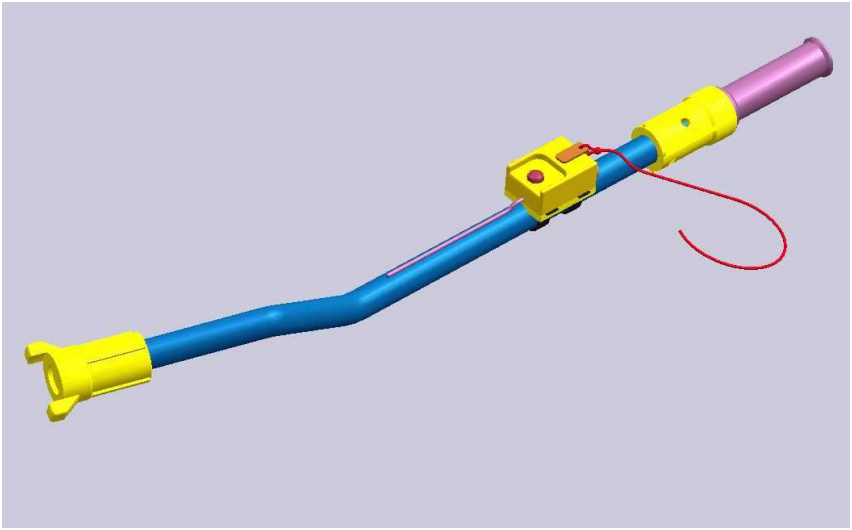
The DM Emitter and the Receiving Case should not be modified.

The on site validation of the DM Emitter is limited to battery replacement. The recommended battery is SAFT LS 14500 C, Lithium 3,6V 2760 mAh.
(**WARNING**: Do not try to reload these batteries, may cause serious wounds and damages!).

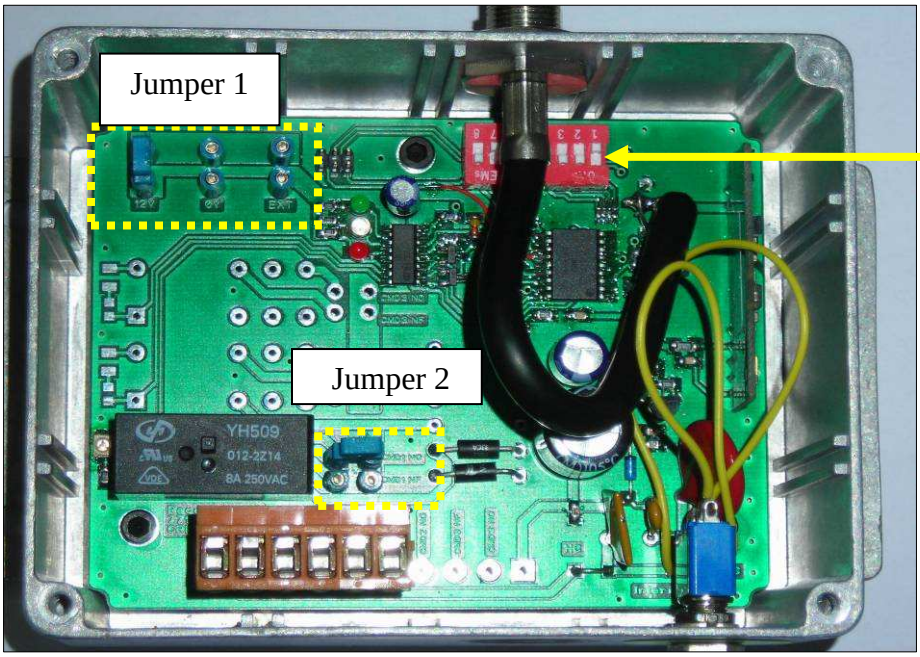
The on site validation of the Receiving Case is limited to the checking of "the relay action", i.e. in the presence of an emission from the DM Emitter, the green LED just beside the relay lights up.

When a defect is detected and the validations do not allow a normal usage, the repair must absolutely be entrusted to an approved professional only.

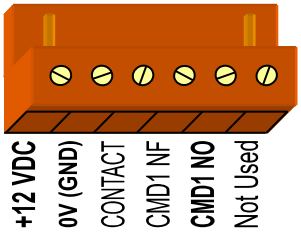
SIMPLE REPRESENTATION OF THE HANDLE



WIRING PLAN OF THE "DEAD-MAN" RECEIVER

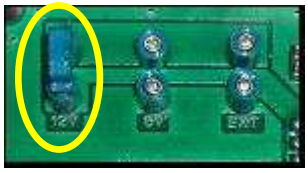


Address bloc :
Do not change the jumpers position or your system will no longer works !

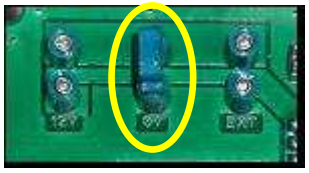


Jumper 1 is used to select the type of voltage that comes out of the receiver. The jumper should be placed on the type of voltage desired in the control when the relay is commuted. There are three possibilities:

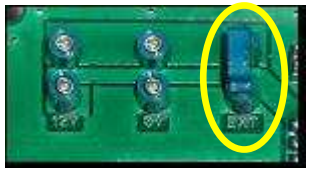
- 12V : The 12V supply voltage will come up on the control, not connected otherwise.
- 0V : The control will be ground-connected when commuted, not connected otherwise.
- OUT : The voltage applied to the contact entry will be injected onto the control when there is a relay commutation, not connected otherwise. The maximum possible voltage is **30Vdc** or 250Vac.



Output voltage :
12V



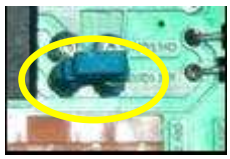
Output voltage :
0V



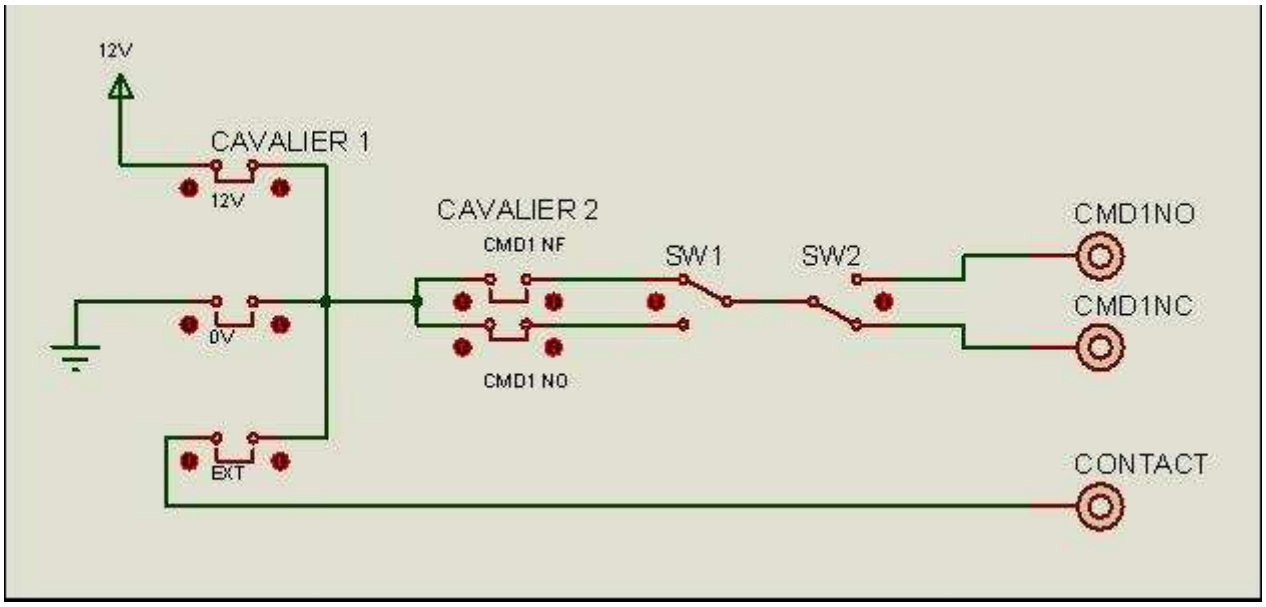
Output voltage :
External

Jumper 2 is used to select the type of contact used: Normally Open position or Normally Closed position. When the Normally Open (NO) position contact is used, the outside control should be cabled on CMD1 NO; when the Normally Closed (NC) position contact is used, the outside control should be cabled on CMD1 NF.

Control configured in
Normally Open position

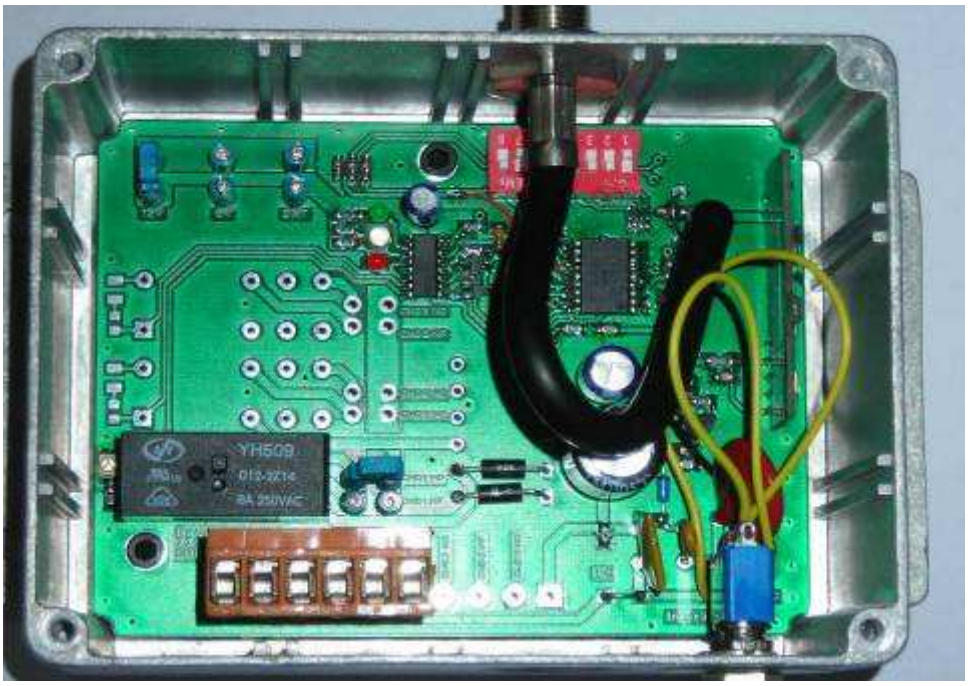


Control configured in
Normally Closed position



WARNING :
Please note that red jumpers block just below the antenna is enterely used to address the receiver with the remote control, so they must not be modified (none of them).

The by default configuration introduces a 12Vdc control on a Normally Open contact. This corresponds to putting jumper 1 in the most left position and jumper 2 in the up position.



By default jumpers configuration

OPERATION OF THE REMOTE CONTROL

The DM remote control includes the following:
- The DM Handle with its Emitter which must absolutely be installed on the tube carrying the pipe diffusing the projected liquid and/or solid fluids.
- The Receiving Case, equipped with an antenna placed vertically.

The DM handle of the HM433-03 version has been fitted with a push button and a handling detector for the tube carrying the Emitter through "wrenching" of the user's handle wire.

The "handling detection" activates reception.
The push-button on the DM handle works in self-latching mode (push then release it, do not keep it pushed).
Pressing the push-button starts up the relay.

As long as the DM Emitter is activated through the operator's "handling", the application is allowed.

As soon as the DM handle is no longer held, the user's handle wire causes the DM safety to be wrenched away and the application is interrupted (70 ms after the signal loss, the receiver cut-off the control relay).

MAINTENANCE AND EXPLOITATION

Systematic checkups on starting :

Before assembling the DM handle:
- Check that the handling detector functions correctly, that the user's handle wire is correctly fixed and that the battery is properly housed.
- Make sure the battery is positioned correctly.
- Should the battery be upside down, the DM handle would not be damaged but it would remain inactive.
- A second housing for a spare battery is available in the Emitter Case (the right housing).
- Use only batteries of the following type: **SAFT LS 14500 C, Lithium 3,6V , case LR6 / AA**.
  Do not try to reload these batteries, may cause serious wounds and damages.

After assembling the DM handle :
- Make sure the remote control works properly by carrying out a projection test respecting the constraints and recommendations related to this activity.
- Strictly respect the hygiene and safety instructions related to the activity in progress.
- Use the DM handle within the limits of use defined by its manufacturer.

DM Technical Characteristics:

- The DM433-03 remote control includes: the DM Emitter and the associated Receiving Case.
- The DM operational temperature is between + 5°C and + 55°C.
- The DM Emitter is IP65, however immersion into a fluid for more than one minute can deteriorate it.
- The transmission range between the DM Emitter and the Receiver in a free field and with direct vision is 150 meters.
- The actual operation range is linked to the environment and transmission conditions of the place.
- The operational autonomy can last up to 6 weeks in nominal usage.
- Do not use 2 or more DM Emitter at the same time and in the covering area, or the both (or more) receivers might cut-off at an untimely moment.

Conditions of Guarantee :

Within the European Union, the DM remote control is guaranteed against every manufacture defect. For other countries, please check with the company.

The warranty period covers 12 months after delivery and includes parts and service. The material first needs to be sent back to our factory in CHABEUIL, France (please see complete address below).

The guarantee can either be:
- Repair of the product, or
- Standard exchange of the product.

The guarantee applies to any material used according to the conditions defining the code of practice of RF transmissions and to the conditions recommended by this document. Also providing the operator has respected the various constraints, standards and/or recommendations relative to its application, as well as the enforced conditions of hygiene and safety.

The guarantee does not cover breaking and/or deterioration of the material following a use that is not in conformity with the normal rules of use.
The guarantee does not cover shipment and packing cost for the material turned over for repair, nor the travelling expenses in case of an on site repair.
The guarantee does not cover the trading losses due to an impossibility to use the DM.

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